Induction of defensive response in Eucalyptus globulus plants and its persistence in vegetative propagation

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The expression of defensive compounds derived from secondary metabolism in plants of Eucalyptus globulus Labill, and the persistence of these in vegetative propagation was evaluated by gas chromatography with flame ionization (GC-FID) and mass spectrometry (MS). The plants were induced by attack from the insect Ctenarytaina eucalypti ("blue gum psyllid") and by mechanical damage. Defense responses were activated in plants for the different types of tested induction. We identified four defensive compounds present in the leaves of plants induced in entomological form (?-terpineol, aromadendrene, caryophylleneoxide and eremophilene); all remained in the vegetative propagation. After mechanical induction, we identified three compounds (?-terpineol, aromadendrene and ledol), of which ledol and aromadendrene persisted in the vegetative propagation. Virtually all the compounds detected, in addition to persisting in the vegetative propagation, showed specificity for the induction type, whether